The View From My Windshield: Just-in-Time Logistics Just Isn't Working

by Captain Jason A. Miseli

At 1845 hours on 21 May 2003, I washed down my beef with mushrooms meals ready to eat (MRE) (only a handful are tolerable anymore) with a bottle of Zulal, pure natural mineral water from Mesopotamia. The 3d Brigade Combat Team (BCT), 3d Infantry Division (3d ID) (Mechanized), contracted the water on 20 May 2003 from a local manufacturer in Northwest Baghdad after significant groundwork by the commander of C Company, 2d Battalion, 69th Armor (2-69 Armor).

Cobra 6 had responsibility for Zone 52 since the transition from combat operations to stability operations and support operations on 14 April 2003. He developed a rapport with the local water manufacturer as part of his security and stability plan. Since the transition, combat service support to the task force (TF) remains significantly deficient, and the critical water shortage alone was a command issue with TF Panther.

With temperatures exceeding 100 degrees daily, high relative humidity, and continuous missions in body armor, load bearing vests and helmets, soldiers were consuming significantly more than the two 1.5 liter bottles per-man, per-day controlled supply rate. It is unthinkable that commanders had to acquire water on the forward edge, after having just participated in Operation Iraqi Freedom and leading a division from Kuwait to Baghdad — just-in-time logistics are failing the U.S. Army.

Successes are isolated events without real linkage to the supported organization's requirements. The Panthers need 10 bottles per man, per day, but the controlled supply rate (CSR) appears to be written in stone, unchanging in the face of our actual requirements on the ground. "They" have limits on what we can get because of haul and prioritization limitations in theater, or in simple tanker's terms, have failed to accomplish their fundamental mission: supply the soldier on the line.

On 6 April 2003, TF 2-69 Armor led the 3d BCT into Northwest Baghdad, and has maintained a continuous presence in the Kazimiyah district. On 13 April 2003, the TF consolidated, following the closure of the field trains on forward operating base Panther. To illustrate my harsh premise, I will examine combat service support (CSS) to my TF primarily from 13 April to 21 May 2003. To be clear, this is not acceptance of the equally unreliable and insufficient CSS we received during combat operations. The only CSS success during the war, from my perspective, was fuel. The reasons for this success will be discussed later. To provide a less cluttered background, the focus of this discussion will be CSS in the completely static environment in which the 3d ID (M) has operated since 14 April 2003.

TF 2-69 Armor limped into Baghdad due to extremely limited class IX resupply during the war. Upon occupation of forward operating base Panther, the TF rolling slant (number of combat vehicles that could shoot, move, and communicate even with limitations) was 29 of 30 tanks and 13 of 14 Bradley Fighting Vehicles (BFV). However, the actual slant (per 10 standards) was 0 of 30 tanks and 7 of 14 BFVs. These two slants illustrate how incredibly tough the M1 tank and M2 BFV are as combat systems. These vehicles survived immeasurable volumes of small arms, heavy machine gun, rocket-propelled grenade (RPG), and indirect fires, as well as suicide attack by cars, vans, and heavy trucks. These vehicles also illustrate that big, heavy class IX items, such as track, road wheels, road arms, and torsion bars, which a task

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force cannot carry in significant quantities, greatly affect operational readiness rates.

Three factors saved us from a rolling slant of 0 of 30 tanks and 7 of 14 BFVs. The first was a robust prescribed load list (PLL) put together by our battalion maintenance team. The PLL took from 8 January to 19 March 2003 to build, and we crossed the border with approximately 24 percent lines zero balance of over 1,100 total lines. The second factor was exceptional battlefield damage assessment and repair by experienced and empowered mechanics under outstanding leaders. Lastly, we recovered a destroyed M1A1 near An Najaf and stripped every usable part we could, to include both sides of track, all road wheels, and all usable road arms. With the exception of one delivery of road wheels and M1 track in early April, we did not receive any significant class IX deliveries during the war. This class IX catastrophe was clearly exacerbated by the fact that until April, the main support battalion's authorized stock list was located at Camp New York, Kuwait, almost 700 kilometers by main supply route from Baghdad.

Our expectation on consolidation in Baghdad was simple — now that we were no longer attacking across Iraq, knowingly outpacing our logistics, we should see nonmission capable class IX components flow forward. That expectation was not to be met. Instead of the class IX floodgates opening, we saw barely a trickle, and 5 weeks later, we still sit at an actual slant of 0 of 30 tanks and 7 of 14 BFVs. Nary a requirement has gone past the forward support battalion (FSB) since we occupied Baghdad, and even now, our maintenance technician and support operations officer fight for the simplest of parts, such as HMMWV tires, to keep our essential wheels moving.

Equally appalling is the complete lack of progress in improving soldier quality of life by providing reasonable class I. Since 14 April 2003, we have received one class I supplement of fruit, muffins, and cereal bars, and one delivery of ice. Beyond those supplements, our ration cycle has consisted of about one unit ground ration (UGR) per day and two MREs for over 5 weeks of static operations. The class I problem, as discussed earlier, extends well beyond UGRs versus MREs for breakfast and dinner (although it is quite interesting to visit Baghdad International Airport during meal time in comparison). That issue ultimately becomes one of quality of life and preference more than essential sustenance. When critical supplies, like bottled water, are unavailable in sufficient quantity in a hot weather climate like Baghdad's, then the just-in-time system has failed. Unfortunately, considering the combat arms ethos of mission first, soldiers do not always appear to exist throughout the logistics realm, especially at the upper echelons of support. Mission failure is often shrugged off in one of three ways: blaming the system, accepting the failure as the norm, or commanders addressing issues at higher headquarters to get senior commander involvement. The combat arms mindset exemplified throughout this war — accomplishing your mission so others might accomplish theirs — appears to be in direct contrast to the just-in-time logistics concept and the culture.

When a mechanized infantry BCT cannot get more than one or two bottles of water per soldier, per day, and must subsequently rely on locally purchased water and poor-tasting bulk water to meet essential sustenance, does our just-in-time logistics system respond? The answer is simply no. Instead, we default to the failure culture and the associated safety nets that support that culture. As of 15 May 2003, the CSR for the 3d ID was two bottles per soldier per day because our division was fifth in the theater's priority of resupply. By 21 May 2003, the response to our requests for water was even less acceptable: the 3D BCT was supposed to leave in mid-May. Well, the grim reality is that we are here, and we are now drinking Iraqi water. Sadly enough, it tests as clean or better than our own bulk water, and fortunately, 24 hours later, none of us have had any adverse reactions.

One class of supply can be deemed a success story from combat operations and is generally no longer relevant, given current operations. For several reasons, TF 2-69 Armor departed the An Nasiriyah area on 22 March 2003, without 5,000-gallon fuel truck augmentation. Despite continuing our attack without this essential resource, we had only one critical fuel shortage, on 25 March 2003, when we had less than 4,000 gallons on hand across our 13 M978 fuel heavy expanded mobility tactical trucks (HEMTTs).

Within 24 hours, the 1st BCT (to whom we were cross-attached) completely met our requirements. The success of refueling operations during the war does not stand as logistics success, but instead further illustrates the cultural differences that must be resolved before the next conflict. Fuel resupply happened because it had tremendous commander visibility from the TF to corps level. The warrior ethos clearly permeated fuel operations throughout the war. On 23 March 2003, for instance, the assistant division commander (support) for the 3d ID was personally present at a corps refuel site southwest of As Samawah ensuring distribution to maneuver forces. Why? Because fuel had to happen — it had *command emphasis* because fuel was critical to mission success.

For combat arms organizations, success is the norm, not the exception, and mission failure is not tolerated. Until success (defined as meeting the requirements of the supported organization when needs are identified) becomes the norm for our logistics system in every endeavor, then the quality of our collective mission accomplishment and the quality of our Army as a whole will never be maximized. If our logistics systems cannot deliver sufficient class IX at the National Training Center (NTC) or sufficient potable water at the Joint Readiness Training Center, then

those failures must not be tolerated. If we, as an Army, cannot get M1A1 starters to tank battalions at the NTC, then it is really no surprise that we cannot get road wheels, track, and arms to a tank battalion in Baghdad.

The cultural clash becomes even more evident in examining the class IX example. Typically, during training, the just-in-time logistics failures are allowed to exist as combat arms organizations simply bypass logistics obstacles to solve their own problems. Battalion maintenance officers, technicians, and motor sergeants Army-wide clearly understand this, as they search for class IX components throughout their brigades, divisions, installations, and even theaters to sustain operational readiness rates in the face of just-in-time logistics failures.

Now, the difficult part: proving that our tactical logisticians are not at fault for the shortcomings of the system in which they operate. Throughout Operation Iraqi Freedom, I fought alongside many professional and dedicated logisticians who were appalled at the actual application of just-in-time logistics in modern maneuver warfare. Even the NTC, with its seeming vastness, pales in comparison to our initial 140-kilometer movement from the international border to assault position Barrows, south of An Nasiryirah (the first 24 hours of the war for the 3d BCT). Did our team do everything they could to give us the resources they had? Absolutely. Did they have or get any significant supplies other than MREs, bulk water, and fuel after An Nasiriyah? No. The problem is not the soldiers and leaders in the FSB; it is larger and esoteric.

As an Army, we created a system designed to save money in the short term by delivering precisely what the trooper on the line needs just as he runs out of that item. This system forces us to live day-to-day, even during combat and stability operations. Instead of desperately hanging on for the next water push, we should be maintaining sufficient inventories of supplies to meet ongoing requirements for longer periods of time (perhaps 5 to 7 days) and any contingencies. I never thought that mindset would infect the U.S. Army — historically the best supported Army in the world. I also never thought that U.S. soldiers would buy blocks of ice from Iraqi street vendors to chill their one daily bottle of Zulal water.

The following is an after action review of the lessons learned from the field trains command post, TF 2-69 Armor, during execution of combat operations in support of Operation Iraqi Freedom:

Combat Service Support

Subject: Class I

Observation 1: The TF Red One report is based on assigned and attached personnel only, and is the basis for class I distribution.

Discussion: The TF Red One report reflected 731 soldiers at the onset of Operation Iraqi Freedom. With operational control (OPCON) personnel added in, however, the headcount varied between 850 and 900 soldiers throughout the war. Although all Orange One requests reflected the number of personnel on hand, our TF only received rations and water to feed the 731 personnel with each class I push. Extended lines of communication (LOC) and continuous operations prevented OPCON personnel from receiving class I from their parent organizations, so the TF provided rations and water for them to meet basic sustenance requirements. Meeting these requirements caused the TF to continuously operate in a class I deficit during combat operations.

Recommendation: Modify the Red One report to include OPCON personnel and use the expanded number as the basis for rations issue. If this recommendation is not feasible, use the TF Orange One request as the issue basis.

Observation 2: Damage and loss of rations due to enemy fire.

Discussion: Many combat vehicles in the TF load-planned their MREs and bulk water on the outside of their vehicles during operations. Each time a combat vehicle received small-arms, RPG, or indirect fire, their rations were exposed to the effects of these fires, and quite often rations were damaged or destroyed. When loss due to enemy action is coupled with already existing shortages, the rations situation became critical within the TF; and for several days, some elements were living day-to-day on MREs.

Recommendation: Distribute a 5 percent overage with all class I pushes to allow for losses and late changes in the TF headcount.

Observation 3: Potable bulk water for Headquarters and Headquarters Company (HHC).

Discussion: HHC, TF 2-69 Armor is authorized three M149A1 water trailer tanks per the Fiscal Year (FY) 03 modification table of organization and equipment (MTOE). At line of departure (LD), HHC had four water trailers, but only the authorized three could haul potable water. As the TF transitioned to consuming bulk water, consumption forward in the TF battlespace for HHC elements exceeded 400 gallons per day (the capacity of one trailer). Three trailers did not allow a sustainable bulk water cycle for the TF. Two water trailers were required forward in a 24-hour period, and distances between the field trains and the TF allowed only one logistics package (LOGPAC) per day. To provide sufficient bulk water without shortages, two trailers needed to be forward (being consumed) while two trailers were in the field trains being resupplied. This MTOE deficiency forced HHC elements to draw bulk water from company teams, affecting their resupply operations in terms of time and quantity of water available.

Recommendation: Add a fourth M149A1 water trailer tank to the MTOE for a tank battalion HHC (LIN W98825).

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Subject: Class II

Observation: Five-gallon water can resupply during combat operations.

Discussion: In addition to damaging rations, small-arms, RPG, and indirect fires also destroyed five-gallon water cans nearly every time the TF had contact. Some combat vehicles attacked into Baghdad with no five-gallon water cans and were sustained by refilling 1.5-liter water bottles they had already consumed. As of 22 April 2003, no five-gallon water cans had been received per class II requisitions. The total TF requirement at the end of hostilities was approximately 75 water cans.

Recommendation: Add or carry at least 100 five-gallon water cans in the alternate storage location (ASL) at all echelons of support.

Subject: Class III (P)

Observation: TF reached zero balance on critical class III (P) items during operations to secure Baghdad.

Discussion. TF 2-69 Armor used a tiered system of class III (P) unit basic load (UBL). First and foremost, all combat vehicles maintained 100 percent UBL at all times. Their replenishment came from the combat trains' UBL, which was the second tier of UBL. As combat vehicles were resupplied from the combat trains, the combat trains were resupplied from the field trains. On 5 April 2003, the field trains went zero-balance on select products, and on 9 April 2003, the combat trains went zero-balance on the same fluids. When the division transitioned on 14 April 2003, combat vehicles were well below UBL on the same fluids. Critical shortages were: 10W, 15/40W, 30W, and grease, artillery, and automotive (GAA).

Recommendation: Increase class III (P) quantities in the ASL at all echelons of support; modify UBL at combat trains and field trains.

Subject: Class V

Observation: Availability of class V for resupply.

Discussion: Following the battle at Al Kifl, the TF was short on M1A1 120mm high-explosive antitank (HEAT) and multipurpose antitank (MPAT) rounds, 120mm mortar high-explosive rounds, 12-gauge shotgun shells, and 40mm M203 ammunition. Requests for resupplies were submitted on 27 and 28 March 2003 with limited success (.50 cal requirements met). Tank main gun ammunition was not received until 2 April 2003 after subsequent requests were made when reattached to 3d BCT. Quantities received on 2 April 2003 were much lower than required, but the ammo pushed us from critically low on HEAT to functional for the Karbala attack.

Recommendation: Class V combat-configured loads (CCLs) must be available immediately upon commencing operations for all critical DOD identification codes.

Subject: Class VII

Observation: Availability of complete TA-50 sets.

Discussion: Nine Soldiers in TF 2-69 Armor lost all TA-50 and on-hand organizational clothing and individual equipment (OCIE), due to enemy action between 6 and 10 April 2003. The first three soldiers received a partial TA-50 issue of odd sizes and all available items. The issue proved marginally useful due to the limited items available, and the subsequent six soldiers could not get an issue for several days, as the division support area (DSA) was zero balance on most TA-50 items. Additionally, the soldiers did not receive OCIE for a week after their clothing was destroyed.

Recommendation: Carry full sets of TA-50 and necessary OCIE items at ASL in theater to meet combat losses when vehicles are destroyed.

Subject: Class IX

Observation 1: Availability of repair parts outside of TF PLL.

Discussion: TF 2-69 Armor put considerable time and effort into building a very strong PLL while preparing for combat in Kuwait. Even with this robust PLL, the TF would not have sustained beyond Al Kifl, if we had not recovered a destroyed tank from 3d Squadron, 7th Cavalry and stripped it of every usable part. The parts we gained from this cannibalization sustained us until our first significant class IX push (M1A1 road wheels, track, and arms) on 13 April 2003. On 1 April 2003, we drew two major assemblies directly from the main support battalion (MSB) but could not draw from the ASL because it was located at Camp New York, Kuwait, at that time. Once reattached to 3d

BCT, our TF met some class IX requirements from the 203d FSB ASL, but many requests had to be passed back to the DSA. As of 22 April 2003, class IX remained a critically short commodity with our PLL virtually stripped of high demand items and the ASL critically short.

Recommendation: Conduct PLL and ASL reviews to ensure they are carrying what is truly needed through the execution of combat operations. Push ASL as far forward as possible or dedicate lift assets to moving nonmission capable class IX forward by air.

Observation 2: Availability of critical communications parts and batteries.

Discussion. The 15-day unit basic load (UBL) of batteries sustained the TF for approximately 20 days before certain batteries were critically low. Battery resupplies were isolated events and limped us through to transition to stability operations and support operations. The TF could not have sustained combat operations beyond the transition date without significant resupply. A similar problem with basic communications equipment (antennas, hand microphones, and cables) existed as well. The TF did not receive requested parts before movement to attack positions, and could not draw off 3d FSB or 203d FSB ASL. Similar to vehicle repair parts, combat losses and scrounging kept us functional for the short term. As with batteries, the TF could not have sustained operations much beyond the transition date.

Recommendation: Ensure basic communications equipment is carried on ASL at all echelons of CSS. Carry at least a 21-day UBL of batteries and as much equipment as possible at the TF level.

Observation 3: Tire consumption in urban combat.

Discussion: Debris, glass, and maneuver in highly restrictive urban terrain took its toll on tires during the attack into northwest Baghdad. At one point, the TF needed 20 HMMWV tires to keep scout and critical-leader vehicles fully mission capable, and supply sergeant 2½-ton trucks were each destroying 2-to-4 tires running LOGPAC. Similar problems occurred across the wheeled fleet from Al Kifl onward.

Recommendation: Increase number of tires, tubes, and seal kits on PLL and ASL. Additionally, add complete wheels (tires mounted and inflated) to ASL and issue as many spares (complete) as the TF can haul. Prioritize complete wheels higher in the TF haul plan or reconfigure load plans before entering urban areas.

Subject: Combat Service Support Operations

Observation 1: Ensure supported units have every opportunity to self-resupply.

Discussion: During the battle at Al Kifl, we did not push bulk water to the company teams for over 36 hours after the TF first entered the city. When the TF attacked into Al Kifl, every combat vehicle had between a 3-and-5 day supply of MREs and bottled water, and full bulk water. The first LOGPAC consisted of class III, class V, and class IX only because the field trains command post (FTCP) had not received a push of MREs or bottled water, and we erroneously assumed that consuming an additional 24 hours of class I would not have a significant impact on the company teams. Our assumption forced many crews to use the remaining water from their UBL, dropping them to 1 to 2 days of supply on hand. The second LOGPAC into Al Kifl consisted of MREs, bottled water, and bulk water, but we had created an irrecoverable bottled-water deficit that followed us for the remainder of the war.

Recommendation: Conduct resupply of every available resource at every opportunity. Treat each LOGPAC as if it may be the last one ever in an effort to preserve combat vehicle UBL of all classes of supply.

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Observation 2: Haul capacity versus haul requirements for an armored TF.

Discussion: TF 2-69 AR attacked with 12 M977 cargo HEMTTs and two M916 five-ton tractors with lowboy trailers. One tractor was hauling the TF roller, and the other initially carried M1A1 Vee packs and TF Sanator. The 12 cargo HEMTTs were configured with eight carrying class V, one carrying class I, one carrying tents and soldier bags, and two carrying class III (P). Above and beyond what was load-planned on individual vehicles or on cargo trucks, a great deal of HHC MTOE equipment was left in storage at Camp New York, Kuwait. The supplies carried forward under this haul plan were critical in sustaining the TF for an extended period, given the supply constraints we experienced. If we had hauled other supplies or more MTOE equipment, we would not have sustained the TF for as long as we did.

Recommendation: Increase haul capacity for armor battalions by adding at least four, if not six, HEMTT trailers to the MTOE. This allows the TF to configure class V CCLs on trailers and move with M978 fuel HEMTTs as prime movers, reducing the number of vehicles the company teams must control during LOGPAC, and freeing up M977s to haul critical items such as mounted tires or major assemblies.

Observation 3: Combat vehicles escort CSS assets when contact is likely.

Discussion: Iraqi soldiers and irregular forces learned quickly that attacking an M1A1 or an M2 was costly. To protect our combat trains and CSS assets, a scout section provided security during movement and LOGPAC operations; however, this was not sufficient to deter the enemy on one occasion and the TF lost an M977, M978, and M1025 to an ambush. The presence of a tank or M2 section may have deterred the enemy or facilitated his destruction more quickly in this ambush than light-skinned scout trucks. Given the absolute importance of each M977 and M978, every reasonable effort should be made to protect them during combat operations.

Recommendation: Assign at least one M2 section to the combat trains to protect all CSS assets during movement and LOGPAC operations. If available, attach a military police section to the TF for route and LOGPAC security (if equipped with M1114s) to keep all combat power forward in lieu of the M2 section.

Observation 4: Psychological operation (PSYOP) efforts on main supply routes (MSRs) once combat power passes through.

Discussion: On several MSRs, Iraqis interfered with CSS traffic more and more after combat power had already passed. To avoid this tactical and safety risk, PSYOP efforts should be sustained as possible on BCT or division MSRs to ensure they remain clear of Iraqi citizens or enemy activity.

Recommendation: Allocate PSYOP resources to rear area security along with a strong military police presence.

Observation 5: Support platoon leader presence in combat trains vice field trains.

Discussion: Combat trains are not resourced to control large vehicle convoys and, at times, more than half of the support platoon was forward in the combat trains. The support platoon leader's presence in the field trains during combat operations is not necessary as the commander, first sergeant, and executive officer are available to execute movement forward to the TF logistics release point (LRP) and coordinate resupply from the battalion support area (BSA). The support platoon leader's presence in the combat trains greatly simplifies control of HEMTTs during movement and LOGPAC operations, allowing the TF S4 to focus on coordination and upcoming logistics considerations.

Recommendation: Have the support platoon leader remain in the combat trains with his forward elements to assist in controlling combat trains command post (CTCP) moves, execution of TF LOGPAC, and linkup at the TF LRP with field trains assets.

Observation 6: CSS continuity during cross-attachment of TFs.

Discussion: Following the 3d BCT attack vicinity of An Nasiriyah, TF 2-69 AR was attached to the 1st BCT, presumably for the duration of the war. On 31 March 2003, however, TF 2-69 AR was detached from the1st BCT and returned to the control of the 3d BCT. Between these two attachments, all logistics continuity for the TF was lost as all of our requisitions were under the supporting FSB's unit identification code. During the first attachment to the 1st BCT, this was not critical, as we had not ordered any supplies since the war began. When we returned to the 3d BCT, the TF lost 7 days worth of requisitions, all of which were under 3d FSB's unit identification code (UIC). The impacts of this were clear as we ran critically low on class II, III (P), V, and IX that we ordered while attached to the 1st BCT that was not delivered to the 203d FSB.

Recommendation: Order class II, III (P), V, and IX directly against the TF UIC vice the FSB UIC, allowing TF cross-attachment without interruption of TF CSS.

Observation 7: Communication and situational awareness over extended distances.

Discussion: When TF 2-69 began its attack into northwest Baghdad, the field trains were held west of the Euphrates River for 8 days. During this time, the TF was over 120km from the BSA, and there was no direct communications between the TF and the field trains except during LRP once a day. The TF S4 and HHC commander relied on experience and logistics estimates to meet TF requirements, but this lacked precision and caused delays in meeting requirements. Additionally, the field trains lacked any situational awareness regarding the TF attack.

Recommendation: Resource the combat trains and field trains with Force XXI battle command brigade and below (FBCB2) or Blue Force Tracker to maximize the situational awareness of both command posts and give each a reliable long-distance communications platform via text messages. This allows company teams to submit logistics requirements via FBCB2 vice FM, as well as increase the responsiveness of all CSS elements within the TF.

Observation 8: Haul assets for TF rollers.

Discussion: The M916 5-ton tractor with a low-bed trailer is not off-road capable on anything other than a hard surface road. Consistently, the low-bed truck would get mired in sand even without a roller on the trailer, and it significantly slowed our movement when the field trains moved cross-country due to the continuous recovery requirement. Because of its terrible mobility when uploaded with a roller (having gotten so mired that we could not recover the trailer), I had to abandon the TF roller within 24 hours of attacking into Iraq, costing the TF a critical capability.

Recommendation: Replace the low-bed trailer with a cross-country capable trailer or eliminate rollers from the MTOE because the battalion is not resourced to haul them.

Observation 9: Command and control of HEMTTs in support platoon.

Discussion: Combat operations required exceptional flexibility and responsiveness from every member of the TF, to include the M977 and M978 operators from support platoon. The platoon has only seven radios and is not configured for dynamic

operations. Coordination requires face-to-face discussion or using hand and arm signals, and is anything but responsive. On numerous occasions, the combat trains' ability to respond quickly was significantly impaired because there was no FM communications between the vehicles.

Recommendation: Resource the support platoon with vehicle-mounted radios for the platoon leader, platoon sergeant, squad leaders, and team leaders (11 radios total), and handheld radios for all support platoon vehicles to allow responsive employment of the platoon.

Subject: MTOE

Observation 1: Support platoon command and control.

Discussion: The support platoon currently has one M998 and seven RT-1523Es authorized, two of which are vehicle mounted in the M998, and the remaining five are manpack configuration. During this operation, the support platoon leader had an M1025 with a mounted .50 cal, and the support platoon sergeant had an M998. This greatly increased the command and control of the platoon during movement and allowed them to split operations between the combat trains and the field trains. With additional communications between vehicles, the platoon would have been exceptionally responsive during execution of combat operations.

Recommendations: Add one M1025 with a .50 cal and gunner for the support platoon leader (dual-net capable vehicle); retain the M998 for the support platoon sergeant (single-net capable vehicle); add eight additional single net capable systems for the four squad leaders and four team leaders; and use integrated communications or portable radio communications for vehicle-to-vehicle communications across the platoon.

Observation 2: Haul capacity.

Discussion: See above in CSS operations.

Recommendation: Add at least four HEMTT trailers to the MTOE for a tank battalion. Ideal number is six trailers — two per squad that support a company team.

Observation 3: Crew-served weapons and platforms for HEMTTs.

Discussion: Two M977 .50-cal ring mounts arrived prior to line of departure into Iraq, and these proved exceptionally useful in deterring attacks on TF 2-69 AR CSS assets. During combat operations, all M977 and M978 truck commanders were exposed through the hatch on their HEMTTs to increase their fields of fire and ability to scan. Mounting a .50 cal machine gun provided that exposed soldier with a more lethal and effective weapon to employ if attacked and served as an excellent deterrent. Two additional HEMTTs had crew-served machine guns (one M240B and one M249) and these also proved highly valuable in contact.

Recommendation: Mount .50-cal machine guns, with ring mounts, on all M977s in support platoon (12 total) plus one .50 cal on the support platoon leader's M1025; and arm M978s with M249 or M240B machine guns (six M249s and seven M240Bs) to provide overwhelming firepower, if attacked.

Observation 4: Transportation for the S4 noncommissioned officer in charge (NCOIC).

Discussion: The TF S4 NCOIC is assigned to the field trains to coordinate and supervise supply ordering and distribution. Under the new MTOE, he is no longer authorized an M998 and must rely on the S1 NCOIC for transportation. During execution of operations, this impacted the field trains, as the S4 NCOIC could not operate independently in the BSA, or more importantly, between the BSA and the DSA to ensure TF requirements were met.

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Recommendation: Add one M998 to the MTOE for the S4 NCOIC with single-net capability to allow independent operation to coordinate required supplies.

Observation 5: Communications for key maintenance personnel.

Discussion: Per the FY 03 MTOE, the battalion maintenance sergeant is not authorized a radio system, nor are the 10-ton or 5-ton wreckers. Without radios, these key personnel are limited in their ability to operate independently, and recovery and maintenance operations are overly centralized to ensure communications coverage.

Recommendation: Add three single net radio systems to the maintenance platoon MTOE to allow independent recovery operations and facilitate managing and delivering class IX throughout the TF.

Observation 6: Dedicated command and control (C2) platform for the FTCP.

Discussion: The FTCP is a key element of TF logistics execution. It serves as the hub where all requirements from across the TF are collected, subsequently requested, and then distributed as available. The MTOE does not resource this operation with any C2 platform, and there is no capability without a dedicated command post vehicle to mount and monitor FBCB2, unless one is allocated to the FTCP.

Recommendation: Add a dedicated C2 vehicle to the MTOE for the FTCP. Recommended platform is an M577 (FM and FBCB2 capable.)

Observation 7: Acquisition and target identification for .50-cal gunners.

Discussion: Tracer burnout for a .50-cal machine gun is 1800 meters — well beyond the range at which a gunner can identify and classify a target. A similar problem exists for M240B gunners with a tracer burnout of 900 meters. The MTOE for HHC authorizes 34 M22 binoculars, of which 20 belong to the scout platoon. To ensure correct target acquisition and identification at long ranges, every M240B and .50-cal gunner should have a pair of binoculars available.

Recommendation: Beyond the scout and mortar platoons, add sufficient M22 binoculars to the MTOE to have one per .50-cal and M240B machine gun throughout the HHC.

Observation 8: FBCB2 distribution and quantities.

Discussion: See CSS operations above.

Recommendation: One FBCB2 to the combat trains command post; and one FBCB2 to the FTCP.

Observation 9: Bulk potable water for HHC, TF 2-69 AR.

Discussion: See above in class I.

Recommendation: Add one additional (four total) M149A1 water trailer tank to the MTOE for a tank battalion HHC.

Observation 10: M9 pistol as primary weapon.

Discussion: With the exception of tank crewmen, every soldier assigned an M9 pistol also had an M16 rifle or M4 carbine for this war. During numerous firefights and engagements, this proved crucial to the success of our TF and the survivability of our soldiers. The M9 is a good backup weapon for close quarters but is not sufficient on the asymmetrical battlefield. On numerous occasions, tactical operations centers, combat trains, and field trains personnel were engaged by small-arms fire and were able to return accurate and lethal fire with their rifles. Had these personnel been armed with only an M9, their lives would have been at significant risk during this contact.

Recommendation: Add sufficient M16 rifles or M4 carbines to the MTOE to arm all M9-carrying personnel, minus eight M1A1 crewmen, with an M16 or M4 to sustain the effective lethality demonstrated during Operation Iraqi Freedom.

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